

CLAIMS:

1. A driver circuit, comprising:

a first driver circuit having a first output terminal operatively responsive to an output load resistance corresponding to a modulator circuit and a second output terminal operatively responsive to a termination resistance, said first driver circuit having a constant current source configured to supply a current signal in response to an input signal applied to said first driver circuit; and

a second driver circuit having a constant current source, said second driver circuit operatively responsive to said first driver circuit by a first and second input terminals.

2. The driver circuit of claim 1, wherein said constant current source of said second driver circuit is disabled.

3. The driver circuit of claim 1, wherein said first driver circuit further comprises a first transistor, said first transistor having a source terminal operatively responsive to said constant current source, a drain terminal operatively responsive to a first resistor, and a gate terminal configured to receive said input signal.

4. The driver circuit of claim 3, wherein said input signal is a first input signal, said first driver circuit further comprising a second transistor having a source terminal operatively responsive to said constant current source and said source terminal of said

first transistor, a drain terminal operatively responsive to a second resistor and a gate terminal configured to receive a second input signal.

5. The driver circuit of claim 4, wherein said first output terminal is connected, at a first end, to said drain terminal of said first transistor and to an input of said modulator circuit at a second end, and said second output terminal is connected, at a first end, to said drain terminal of said second transistor and to said termination resistance at a second end.

6. The driver circuit of claim 1, wherein said second driver circuit further comprising first and second output terminals, said output terminals being unconnected to said modulator circuit and said termination resistor disabling said constant current source associated with said second driver circuit.

7. The driver circuit of claim 1, wherein said second driver circuit further comprising a first transistor, said first transistor having a source terminal operatively responsive to said constant current source, a drain terminal operatively responsive to a first resistor, and a gate terminal configured to receive said input signal.

8. The driver circuit of claim 7, wherein said input signal is a first input signal, and said second driver circuit further comprising a second transistor having a source terminal operatively responsive to said constant current source of said second driver circuit and said source terminal of said first transistor, a drain terminal operatively responsive to a second resistor and a gate terminal configured to receive a second input signal.

9. The driver circuit of claim 8, wherein said second driver circuit further comprising first and second output terminals, said first output terminal connected at a first end to said drain terminal of said second transistor and to said termination resistance at a second end, said second output terminal connected at a first end to said drain terminal of said first transistor and to an input of said modulator circuit.
10. The driver circuit of claim 1, wherein said first driver circuit further comprising first and second power supply terminals, said second driver circuit further comprising first and second power supply terminals, said first driver circuit further operatively responsive to said second driver circuit by said first and second output terminals.
11. The driver circuit of claim 10, wherein a voltage signal is supplied to said first driver circuit via said first and second power supply terminals but not supplied to said first and second power supply terminals of said second driver circuit disabling said constant current source associated with said second driver circuit.
12. The driver circuit of claim 1, wherein said first and second driver circuits are mirror images of each other.
13. An optical communication system, comprising:
  - a transmission medium configured to allow propagation of optical signals;

at least one optical amplifier disposed along said transmission path for amplifying said optical signals; and

a transceiver operatively responsive to said transmission medium, said transceiver comprising a light source, a modulator for modulating said information signals onto light signals generated by said light source and a modulator driver for supplying electrical signals representing said information signals to said modulator, said modulator driver comprising a first driver circuit having a first output terminal operatively responsive to an output load resistance corresponding to said modulator circuit and a second output terminal operatively responsive to a termination resistance, said first driver circuit having a constant current source configured to supply a current signal in response to an input signal applied to said first driver circuit and a second driver circuit having a constant current source, said second driver circuit operatively responsive to said first driver circuit by a first and second input terminals.

14. The system of claim 13, wherein said first driver circuit further comprising first and second power supply terminals, said second driver circuit further comprising first and second power supply terminals, said first driver circuit further operatively responsive to said second driver circuit by said first and second output terminals.

15. The system of claim 14, wherein power is supplied to said first driver circuit via said first and second power supply terminals but not supplied to said first and second power supply terminals of said second driver circuit disabling said constant current source associated with said second driver circuit.

16. A method, comprising:

supplying input signals to first and second modulator driver circuits, each of said circuits including a constant current source;

connecting a first output from said first modulator driver circuit to said optical modulator;

connecting a second output from said first modulator driver circuit to a termination resistance; and

shutting off said current source included in said second modulator driver circuit.

17. The method of claim 16, wherein said first and second modulator driver circuits are mirror images of each other.

18. The method of claim 16, further comprising:

connecting a first output of said second modulator driver circuit to said termination resistance; and

connecting a second output of said second modulator driver circuit to said optical modulator.

19. The method of claim 16, further comprising:

supplying power to said first modulator driver circuit such that a constant current source included in said first modulator driver circuit operates to provide a signal to said optical modulator and said termination resistance; and

- shutting off power supplied to said second modulator driver circuit.
20. The method of claim 19, further comprising:
- connecting a first output of said second modulator driver circuit to said optical modulator; and
- connecting a second output of said second modulator driver circuit to said termination resistance.